REMARKS

Claims 1-20 remain pending in this application.

Claims 1-20 have been rejected under 35 U.S.C. § 103(a) as being unpatentable over Rom et al. (U.S. Patent No. 6,252,849; hereinafter Rom) in view of Hendel et al. (U.S. Patent No. 6,591,303; hereinafter Hendel). The rejection is respectfully traversed.

As to claim 1, the Office Action states that Rom discloses receiving a data frame on a first logic component (first input buffer) of the network device (switch 16) and points to Fig. 1 and col. 6, lines 30-51 for support (Office Action – page 3). The Office Action also states that Rom discloses transmitting the data frame to a second logic component (output buffer 68) on the network device, receiving the data frame at the second logic component, processing the data frame to generate frame forwarding information and transferring the frame forwarding information to an output queue on the second logic component and points to Fig. 3 and col. 4, lines 34-50 for support (Office Action – page 3).

Initially, the applicants note that there is no switch 16 or output buffer 68 in Rom. The applicants, therefore, respectfully request clarification as to these elements in any subsequent communication if the rejection is maintained so that the applicants can more fully understand the rejection with respect to Rom.

In any event, Rom at col. 6, lines 30-51 discloses that a data packet may be transmitted between terminals, such as terminals 109 and 111 (Rom – Fig. 1). This portion of Rom further discloses that terminal 109 transmits a packet to input port N of switch 121. Switch 121 then routes the packet to output port 3 of switch 121, where it is buffered before being transmitted to input port 3 of switch 123 via link 131A (Rom – Fig. 1).

Rom, therefore, discloses conventional data processing by switch 121 in which data is forwarded from an input port to an output port. Rom, however, does not disclose processing the data frame to generate frame forwarding information and transferring the frame forwarding information to an output queue on the second logic component, as recited in claim 1.

The Office Action alleges that an output buffer on a switch, such as an output buffer on switch 121, is equivalent to the claimed second logic component. Rom, however, does not disclose generating frame forwarding information and transferring the frame forwarding information to an output queue that is also located on the output buffer, as would be required based on the alleged equivalence between the output buffer in Rom to the claimed second logic component. In contrast, Rom merely discloses transferring a packet received on an input port to an output port.

Claim 1 also recites detecting a condition on the second logic component and transmitting the receive port information associated with the data frame to the first logic component, when the condition is detected. The Office Action states that Rom discloses this feature and points to the abstract, col. 1, lines 40-50 and col. 5, lines 5-29 for support (Office Action – page 3).

The abstract and col. 1, lines 40-50 of Rom disclose generating a PAUSE frame when a level of occupancy in a portion of a buffer associated with a first port exceeds a first level. Rom at col. 5, lines 5-29 discloses that a PAUSE frame may be transmitted from a downstream destination device to an upstream packet source to inhibit transmission of frames by the packet source. This portion of Rom further discloses that the PAUSE frame includes a PAUSE opcode and a time that the upstream source is to hold its transmission

activity. These portions of Rom do not disclose transmitting receive port information associated with the data frame to the first logic component when a condition is detected, as required by claim 1. The PAUSE frame of Rom is merely a typical PAUSE frame and does not include receive port information, as required by claim 1.

In addition, the Office Action indicates that the input and output buffers on switch 121 of Rom are believed to be equivalent to the claimed first and second logic components, respectively (Office Action – page 3). Based on this alleged equivalence, in order for Rom to disclose the claimed transmitting the receive port information to the first logic component when the condition is detected, this would require that some device in Rom would have to transmit receive port information associated with the data frame to the input buffer on switch 121 when a condition is detected on the output buffer of switch 121. Rom does not perform this feature. That is, Rom does not disclose transmitting receive port information to the input buffer when a threshold associated with an output buffer on the same switch exceeds a first level.

The Office Action admits that Rom does not disclose identifying receive port information that identifies a portion on the first logic component on which the data frame was received, transmitting the data frame and receive port information to a second logic component or storing the receive port information on the second logic component. The Office Action, however, states that Hendel discloses these features and points col. 6, lines 60-62 and col. 7, lines 5-13 for support (Office Action – pages 3-4). The applicants respectfully disagree.

Hendel at col. 6, lines 60-62 discloses load balancing in a switch that involves selecting an interface based on the source address of the packet or the packet's port of

arrival. Hendel at col. 7, lines 5-13 discloses that load balancing may include a dynamic

mapping function that considers both the source address and the port of arrival. These

portions of Hendel may disclose identifying receive port information associated with a data

frame and using the receive port information when performing load balancing. Neither of

these portions of Hendel, or any other portions, however, discloses transmitting the receive

port information to a second logic component on the network device and transmitting the

receive port information back to the first logic component when a condition is detected on

the second logic component, as required by claim 1.

For at least the reasons discussed above, the combination of Rom and Hendel does

not disclose or suggest each of the features of claim 1.

In addition, even if, for the sake of argument, the combination of Rom and Hendel

could be construed to disclose or suggest each of the features of claim 1, the applicants

assert that the reasoning provided in the Office Action for combining Rom and Hendel does

not satisfy the requirements of 35 U.S.C. § 103.

For example, the Office Action states that it would have been obvious to incorporate

the teaching of Hendel into Rom "in order to prevent traffic from a particular input port

from dominating the network device" (Office Action – page 4). This is merely a conclusory

statement regarding an alleged benefit of the combination. The applicants note that no

portion of either reference is pointed to as providing motivation for combining Rom and

Hendel. Such motivation does not satisfy the requirements of 35 U.S.C. § 103.

For at least the reasons discussed above, withdrawal of the rejection and allowance

of claim 1 are respectfully requested.

Claims 2-6 are dependent on claim 1 and are believed to be allowable for at least the reasons claim 1 is allowable. In addition, these claims recite additional features not disclosed or suggested by the combination of Rom and Hendel.

For example, claim 4 recites that the transmitting the data frame and the receive port information to the second logic component includes transmitting the data frame and the receive port information together in a single frame, the single frame including a field identifying the receive port information. The Office Action states that Rom discloses this feature and points to col. 3, lines 26-32 and col. 5, lines 5-29 for support (Office Action – page 6). The applicants respectfully disagree.

Initially, the applicants note that with respect to claim 1, the Office Action admits that Rom does not disclose transmitting the data frame and receive port information to a second logic component on the network device (Office Action – page 3). Therefore, Rom cannot further disclose transmitting the data frame and receive port information together in a single frame, as required by claim 4.

Rom at col. 3, lines 26-32 discloses that frames conforming to IEEE 802.3 include a preamble field, a start of frame field, a destination address field, a source address field, a length of data field and a data field. Rom at col. 5, lines 5-29, as discussed above, discloses generating a conventional PAUSE frame for transmission to a packet source. Neither of these portions of Rom discloses or suggests transmitting the data frame and receive port information to a second logic component together in a single frame, as required by claim 4.

For at least this additional reason, withdrawal of the rejection and allowance of claim 4 are respectively requested.

Claim 6 recites that the processing and transferring associated with a plurality of data frames are performed in a same order as which the receive port information for the respective plurality of data frames is stored by the second logic component. The Office Action states that Hendel discloses this feature and points to col. 6, lines 42-59 for support (Office Action – page 5). The applicants respectfully disagree.

Hendel at column 6, lines 42-59 discloses that an end node inspects the packet header of each packet to associate each packet with a connection and keeps a small cache of MAC or IP destination addresses associated with each network interface. This portion of Hendel further discloses that the end node checks the cache to see if it has recently transmitted a packet to a particular destination address and if it has, the end node enqueues the packet on the same interface it used on the previous packet. If the destination address has not been transmitted recently, the end node enqueues the packet on another queue, such as an empty queue or the next available queue in a round robin fashion.

This portion of Hendel does not disclose or suggest the claimed processing and transferring in a same order as which receive port information for the plurality of data frames is stored by a second logic component, as required by claim 6.

For at least these additional reasons, withdrawal of the rejection and allowance of claim 6 are respectively requested.

Claim 7 recites features similar to claim 1. For reasons similar to those discussed above with respect to claim 1, the combination of Rom and Hendel does not disclose the features of claim 7. Claim 7 recites additional features not disclosed or suggested by the combination of Rom and Hendel.

For example, claim 7 recites that the second data frame processing logic is configured to send a signal to a register when the condition exists, the signal indicating that the register is to output receive port information associated with the data frame to the first logic device. The Office Action states that Rom discloses this feature and points to col. 5, lines 5-29 for support (Office Action – page 6).

Rom at col. 5, lines 5-29, as discussed above, discloses generating a conventional PAUSE frame for transmission to a packet source. This portion of Rom, or any other portion, does not disclose or suggest that output buffer 305 (alleged to be equivalent to the second data frame processing logic) is configured to send a signal to a register (that stores receive port information) when a condition exists, as required by claim 7.

For at least the reasons discussed above, the combination of Rom and Hendel does not disclose each of the features of claim 7. In addition, the applicants assert that it would not have been obvious to combine Rom and Hendel for the reasons discussed above with respect to claim 1. Accordingly, withdrawal of the rejection and allowance of claim 7 are respectively requested.

Claims 8-14 are dependent on claim 7 and are believed to be allowable for at least the reasons claim 7 is allowable. In addition, these claims recite additional features not disclosed or suggested by the combination of Rom and Hendel.

For example, claim 10 recites that the flow-control related operation comprises transmitting a pause frame via the port identified by the receive port information. The Office Action states that Rom discloses this feature and points to col. 5, lines 5-29 for support (Office Action – page 8). The applicants respectfully disagree.

Rom at col. 5, lines 5-29, as discussed above, discloses generating a conventional PAUSE frame for transmission to a packet source. This portion of Rom, however, does not disclose or suggest transmitting the pause frame via the port identified by the receive port information, as required by claim 10.

For at least this additional reason, withdrawal of the rejection and allowance of claim 10 are respectively requested.

Claim 14 recites a feature similar to claim 6. For additional reasons similar to those discussed above with respect to claim 6, withdrawal of the rejection and allowance of claim 14 are respectively requested.

Claim 15 recites features similar to claim 1. For reasons similar to those discussed above with respect to claim 1, the combination of Rom and Hendel does not disclose each of the features of claim 15. In addition, the applicants assert that it would not have been obvious to combine Rom and Hendel for the reasons discussed above with respect to claim 1. Accordingly, withdrawal of the rejection and allowance of claim 15 are respectively requested.

Claims 16-20 are dependent on claim 15 and are believed to be allowable for at least the reasons claim 15 is allowable. In addition, these claims recite additional features not disclosed or suggested by the combination of Rom and Hendel.

For example, claim 17 recites features similar to claim 10 discussed above, claim 18 recites features similar to claim 7 discussed above and claim 19 recites features similar to claim 6 discussed above. For reasons similar to those discussed above with respect to claims 10, 7 and 6, respectively, withdrawal of the rejection and allowance of claims 17, 18 and 19 are respectfully requested.
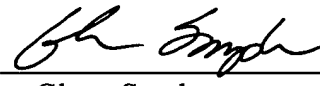
CONCLUSION

In view of the foregoing remarks, the applicants respectfully request withdrawal of the outstanding rejection and the timely allowance of this application.

To the extent necessary, a petition for an extension of time under 37 C.F.R. § 1.136 is hereby made. Please charge any shortage in fees due in connection with the filing of this paper, including extension of time fees, to Deposit Account 50-1070 and please credit any excess fees to such deposit account.

Respectfully submitted,

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